```
============================================================
Sequence Listing was accepted.
If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).
Reviewer: markspencer
Timestamp: [year=2009; month=4; day=27; hr=15; min=51; sec=40; ms=549; ]
============================================================
```

Validated By CRFValidator v 1.0.3

Application No: 10511698   Version No: 2.0

Input Set:

Output Set:

Started:	2009-04-17 19:39:41.874
Finished:	2009-04-17 19:39:46.946
Elapsed:	0 hr(s) 0 min(s) 5 sec(s) 72 ms
Total Warnings:	120
Total Errors:	0
No. of SeqIDs Defined:	120
Actual SeqID Count:	120

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)

```
        Input Set:


        Output Set:



           Started:   2009-04-17 19:39:41.874
          Finished:   2009-04-17 19:39:46.946
           Elapsed:   0 hr(s) 0 min(s) 5 sec(s) 72 ms
   Total Warnings:    120
     Total Errors:    0
No. of SeqIDs Defined: 120
Actual SeqID Count:    120
```

Error code   Error Description

```
        This error has occured more than 20 times, will not be displayed
```

<110> von Knebel-Doeberitz, Magnus
       Gebert, Johannes
       Linnebacher, Michael
       Woerner, Stefan
       Ridder, Ruediger
       Bork, Peer
       Yuan, Yan Ping

<120> Neopeptides and Methods Useful for Detection and Treatment of
       Cancer

<130> 03528.0145.00US00

<140> 10511698
<141> 2009-04-17

<150> PCT/EP 03/04083
<151> 2003-04-17

<150> EP 02 008 773.0
<151> 2002-04-18

<150> EP 02 008 771.4
<151> 2002-04-18

<150> EP 02 008 774.8
<151> 2002-04-18

<160> 120

<170> PatentIn version 3.2

<210> 1
<211> 320
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
      encoded by genes with coding microsatellites

<400> 1
Met Gln Arg Pro Asn Ala His Arg Ile Ser Gln Pro Ile Arg Gln Ile
  1   5   10   15

Ile Tyr Gly Leu Leu Leu Asn Ala Ser Pro His Leu Asp Lys Thr Ser
             20   25   30

Trp Asn Ala Leu Pro Pro Gln Pro Leu Ala Phe Ser Glu Val Glu Arg
         35   40   45

Ile Asn Lys Asn Ile Arg Thr Ser Ile Ile Asp Ala Val Glu Leu Ala
     50   55   60

Lys Asp His Ser Asp Leu Ser Arg Leu Thr Glu Leu Ser Leu Arg Arg
 65   70   75   80

Arg Gln Met Leu Leu Leu Glu Thr Leu Lys Val Lys Gln Thr Ile Leu
                 85   90   95

Glu Pro Ile Pro Thr Ser Leu Lys Leu Pro Ile Ala Val Ser Cys Tyr
            100   105   110

Trp Leu Gln His Thr Glu Thr Lys Ala Lys Leu His His Leu Gln Ser
            115   120   125

Leu Leu Leu Thr Met Leu Val Gly Pro Leu Ile Ala Ile Ile Asn Ser
    130   135   140

Pro Gly Lys Glu Glu Leu Gln Glu Asp Gly Ala Lys Met Leu Tyr Ala
145   150   155   160

Glu Phe Gln Arg Val Lys Ala Gln Thr Arg Leu Gly Thr Arg Leu Asp
                 165   170   175

Leu Asp Thr Ala His Ile Phe Cys Gln Trp Gln Ser Cys Leu Gln Met
            180   185   190

Gly Met Tyr Leu Asn Gln Leu Leu Ser Thr Pro Leu Pro Glu Pro Asp
            195   200   205

Leu Thr Arg Leu Tyr Ser Gly Ser Leu Val His Gly Leu Cys Gln Gln
    210   215   220

Leu Leu Ala Ser Thr Ser Val Glu Ser Leu Leu Ser Ile Cys Pro Glu
225   230   235   240

Ala Lys Gln Leu Tyr Glu Tyr Leu Phe Asn Ala Thr Arg Ser Tyr Ala
                 245   250   255

Pro Ala Glu Ile Phe Leu Pro Lys Gly Arg Ser Asn Ser Lys Lys Lys
            260   265   270

Arg Gln Lys Lys Gln Asn Thr Ser Cys Ser Lys Asn Arg Gly Arg Thr
    275   280   285

Thr Ala His Thr Lys Cys Trp Tyr Glu Gly Asn Asn Arg Phe Gly Leu
    290   295   300

Leu Met Val Glu Asn Leu Glu Glu His Ser Glu Ala Ser Asn Ile Glu
305   310   315   320

<210> 2
<211> 304
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
     encoded by genes with coding microsatellites

<400> 2
Met Gln Arg Pro Asn Ala His Arg Ile Ser Gln Pro Ile Arg Gln Ile
 1   5   10   15

Ile Tyr Gly Leu Leu Leu Asn Ala Ser Pro His Leu Asp Lys Thr Ser
                20   25   30

Trp Asn Ala Leu Pro Pro Gln Pro Leu Ala Phe Ser Glu Val Glu Arg
            35   40   45

Ile Asn Lys Asn Ile Arg Thr Ser Ile Ile Asp Ala Val Glu Leu Ala
        50   55   60

Lys Asp His Ser Asp Leu Ser Arg Leu Thr Glu Leu Ser Leu Arg Arg
 65   70   75   80

Arg Gln Met Leu Leu Leu Glu Thr Leu Lys Val Lys Gln Thr Ile Leu
                85   90   95

Glu Pro Ile Pro Thr Ser Leu Lys Leu Pro Ile Ala Val Ser Cys Tyr
                100   105   110

Trp Leu Gln His Thr Glu Thr Lys Ala Lys Leu His His Leu Gln Ser
            115   120   125

Leu Leu Leu Thr Met Leu Val Gly Pro Leu Ile Ala Ile Ile Asn Ser
        130   135   140

Pro Gly Lys Glu Glu Leu Gln Glu Asp Gly Ala Lys Met Leu Tyr Ala
145   150   155   160

Glu Phe Gln Arg Val Lys Ala Gln Thr Arg Leu Gly Thr Arg Leu Asp
                165   170   175

Leu Asp Thr Ala His Ile Phe Cys Gln Trp Gln Ser Cys Leu Gln Met
            180   185   190

Gly Met Tyr Leu Asn Gln Leu Leu Ser Thr Pro Leu Pro Glu Pro Asp
            195   200   205

Leu Thr Arg Leu Tyr Ser Gly Ser Leu Val His Gly Leu Cys Gln Gln
        210   215   220

Leu Leu Ala Ser Thr Ser Val Glu Ser Leu Leu Ser Ile Cys Pro Glu
225   230   235   240

Ala Lys Gln Leu Tyr Glu Tyr Leu Phe Asn Ala Thr Arg Ser Tyr Ala
                245   250   255

Pro Ala Glu Ile Phe Leu Pro Lys Gly Arg Ser Asn Ser Lys Lys Lys
                260   265   270

Gly Arg Arg Asn Arg Ile Pro Ala Val Leu Arg Thr Glu Gly Glu Pro
        275   280   285

Leu His Thr Pro Ser Val Gly Met Arg Glu Thr Thr Gly Leu Gly Cys
    290   295   300

<210> 3
<211> 282
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
      encoded by genes with coding microsatellites

<400> 3
Met Gln Arg Pro Asn Ala His Arg Ile Ser Gln Pro Ile Arg Gln Ile
  1   5   10   15

Ile Tyr Gly Leu Leu Leu Asn Ala Ser Pro His Leu Asp Lys Thr Ser
            20   25   30

Trp Asn Ala Leu Pro Pro Gln Pro Leu Ala Phe Ser Glu Val Glu Arg
        35   40   45

Ile Asn Lys Asn Ile Arg Thr Ser Ile Ile Asp Ala Val Glu Leu Ala
    50   55   60

Lys Asp His Ser Asp Leu Ser Arg Leu Thr Glu Leu Ser Leu Arg Arg
  65   70   75   80

Arg Gln Met Leu Leu Leu Glu Thr Leu Lys Val Lys Gln Thr Ile Leu
                85   90   95

Glu Pro Ile Pro Thr Ser Leu Lys Leu Pro Ile Ala Val Ser Cys Tyr
            100   105   110

Trp Leu Gln His Thr Glu Thr Lys Ala Lys Leu His His Leu Gln Ser
        115   120   125

Leu Leu Leu Thr Met Leu Val Gly Pro Leu Ile Ala Ile Ile Asn Ser
    130   135   140

Pro Gly Lys Glu Glu Leu Gln Glu Asp Gly Ala Lys Met Leu Tyr Ala
145   150   155   160

Glu Phe Gln Arg Val Lys Ala Gln Thr Arg Leu Gly Thr Arg Leu Asp
                165   170   175

Leu Asp Thr Ala His Ile Phe Cys Gln Trp Gln Ser Cys Leu Gln Met
            180   185   190

Gly Met Tyr Leu Asn Gln Leu Leu Ser Thr Pro Leu Pro Glu Pro Asp

```
                    195                    200                    205

Leu Thr Arg Leu Tyr Ser Gly Ser Leu Val His Gly Leu Cys Gln Gln
    210                    215                    220

Leu Leu Ala Ser Thr Ser Val Glu Ser Leu Leu Ser Ile Cys Pro Glu
225                    230                    235                    240

Ala Lys Gln Leu Tyr Glu Tyr Leu Phe Asn Ala Thr Arg Ser Tyr Ala
                    245                    250                    255

Pro Ala Glu Ile Phe Leu Pro Lys Gly Arg Ser Asn Ser Lys Lys Lys
                    260                    265                    270

Lys Ala Glu Glu Thr Glu Tyr Gln Leu Phe
                    275                    280


<210> 4
<211> 139
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
      encoded by genes with coding microsatellites

<400> 4
Met Gly His Pro Arg Ala Ile Gln Pro Ser Val Phe Phe Ser Pro Tyr
  1                    5                   10                    15

Asp Val His Phe Leu Leu Tyr Pro Ile Arg Cys Pro Tyr Leu Lys Ile
                    20                    25                    30

Gly Arg Phe His Ile Lys Leu Lys Gly Leu His Phe Leu Phe Ser Phe
                    35                    40                    45

Leu Phe Phe Phe Phe Glu Thr Gln Ser His Ser Val Thr Arg Leu Glu
    50                    55                    60

Cys Ser Gly Thr Ile Ser Ala His Cys Asn Leu Cys Leu Pro Gly Ser
65                    70                    75                    80

Ser Asn Ser Pro Ala Ser Ala Ser Arg Val Ala Gly Thr Ala Gly Thr
                    85                    90                    95

Cys Arg Arg Ala Gln Leu Ile Phe Val Phe Leu Ala Glu Met Gly Phe
                    100                    105                    110

His His Val Gly Arg Asp Gly Leu Asp Leu Asn Leu Val Ile His Pro
                    115                    120                    125

Pro Arg Ser Pro Lys Ala Leu Gly Leu Gln Ala
    130                    135


<210> 5
```

<211> 101
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
      encoded by genes with coding microsatellites

<400> 5
Met Gly His Pro Arg Ala Ile Gln Pro Ser Val Phe Phe Ser Pro Tyr
  1   5   10   15

Asp Val His Phe Leu Leu Tyr Pro Ile Arg Cys Pro Tyr Leu Lys Ile
             20   25   30

Gly Arg Phe His Ile Lys Leu Lys Gly Leu His Phe Leu Phe Ser Phe
         35   40   45

Leu Phe Phe Phe Leu Arg His Ser Leu Thr Leu Ser Pro Gly Trp Ser
     50   55   60

Ala Val Ala Arg Ser Arg Leu Thr Ala Thr Ser Ala Ser Gln Val Gln
 65   70   75   80

Val Ile Leu Leu Pro Gln Pro Pro Glu Trp Leu Gly Leu Gln Ala Arg
                 85   90   95

Ala Ala Ala Pro Ser
            100

<210> 6
<211> 53
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
      encoded by genes with coding microsatellites

<400> 6
Met Gly His Pro Arg Ala Ile Gln Pro Ser Val Phe Phe Ser Pro Tyr
  1   5   10   15

Asp Val His Phe Leu Leu Tyr Pro Ile Arg Cys Pro Tyr Leu Lys Ile
             20   25   30

Gly Arg Phe His Ile Lys Leu Lys Gly Leu His Phe Leu Phe Ser Phe
         35   40   45

Leu Phe Phe Phe Phe
     50

<210> 7
<211> 209
<212> PRT

Met Gln Arg Arg Leu Val Gln Gln Trp Ser Val Ala Val Phe Leu Leu
 1   5   10   15

Ser Tyr Ala Val Pro Ser Cys Gly Arg Ser Val Glu Gly Leu Ser Arg
            20   25   30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
        35   40   45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
     50   55   60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
 65   70   75   80

Asn Ser Lys Pro Ser Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
                85   90   95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
            100   105   110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
        115   120   125

Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
     130   135   140

Ser Ala Trp Leu Asp Ser Gly Val Thr Gly Ser Gly Leu Glu Gly Asp
145   150   155   160

His Leu Ser Asp Thr Ser Thr Thr Ser Leu Glu Leu Asp Ser Arg Thr
            165   170   175

Ala Leu Leu Trp Gly Leu Lys Lys Lys Lys Glu Asn Asn Arg Arg Thr
            180   185   190

His His Met Gln Leu Met Ile Ser Leu Phe Lys Ser Pro Leu Leu Leu
        195   200   205

Leu

<400> 8

```
Met Gln Arg Arg Leu Val Gln Gln Trp Ser Val Ala Val Phe Leu Leu
 1               5                  10                  15

Ser Tyr Ala Val Pro Ser Cys Gly Arg Ser Val Glu Gly Leu Ser Arg
                20                  25                  30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
            35                  40                  45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
        50                  55                  60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
 65                  70                  75                  80

Asn Ser Lys Pro Ser Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
                85                  90                  95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
                100                 105                 110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
            115                 120                 125

Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
        130                 135                 140

Ser Ala Trp Leu Asp Ser Gly Val Thr Gly Ser Gly Leu Glu Gly Asp
145                 150                 155                 160

His Leu Ser Asp Thr Ser Thr Thr Ser Leu Glu Leu Asp Ser Arg Thr
                165                 170                 175

Ala Leu Leu Trp Gly Leu Lys Lys Lys Arg Lys Thr Thr Glu Glu His
            180                 185                 190

Ile Ile Cys Asn
        195
```

<210> 9
<211> 202
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
      encoded by genes with coding microsatellites

<400> 9

```
Met Gln Arg Arg Leu Val Gln Gln Trp Ser Val Ala Val Phe Leu Leu
 1               5                  10                  15

Ser Tyr Ala Val Pro Ser Cys Gly Arg Ser Val Glu Gly Leu Ser Arg
```

```
          20                    25                    30

Arg Leu Lys Arg Ala Val Ser Glu His Gln Leu Leu His Asp Lys Gly
        35                    40                    45

Lys Ser Ile Gln Asp Leu Arg Arg Arg Phe Phe Leu His His Leu Ile
      50                    55                    60

Ala Glu Ile His Thr Ala Glu Ile Arg Ala Thr Ser Glu Val Ser Pro
    65                    70                    75                    80

Asn Ser Lys Pro Ser Pro Asn Thr Lys Asn His Pro Val Arg Phe Gly
                  85                    90                    95

Ser Asp Asp Glu Gly Arg Tyr Leu Thr Gln Glu Thr Asn Lys Val Glu
              100                   105                   110

Thr Tyr Lys Glu Gln Pro Leu Lys Thr Pro Gly Lys Lys Lys Lys Gly
            115                   120                   125

Lys Pro Gly Lys Arg Lys Glu Gln Glu Lys Lys Lys Arg Arg Thr Arg
      130                   135                   140

Ser Ala Trp Leu Asp Ser Gly Val Thr Gly Ser Gly Leu Glu Gly Asp
145                   150                   155                   160

His Leu Ser Asp Thr Ser Thr Thr Ser Leu Glu Leu Asp Ser Arg Thr
                165                   170                   175

Ala Leu Leu Trp Gly Leu Lys Lys Lys Lys Gly Lys Gln Gln Lys Asn
            180                   185                   190

Thr Ser Tyr Ala Thr Asn Asp Leu Ile Ile
          195                   200


<210> 10
<211> 567
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: polypeptides
      encoded by genes with
```